

ACTEGA Kelstar

Fountain Solution Troubleshooting Guide

TROUBLESHOOTING GUIDE FOR FOUNTAIN SOLUTIONS

PROBLEM	CAUSE	CORRECTIVE ACTION
pH Drift High Conductivity	Buffer Capacity Exceeded / Excessive Alkaline Contamination	Mix fresh Fountain Solution
	Contaminated Water System	Run Systems Cleaner to flush lines and tank at 1oz. / Gal. of tank capacity, then remix fresh
Quick Conductivity Rise / Minimizing the Conductivity Rise	Too little turnover because of large tank capacity	Run solution level at about half the capacity by displacing the water with a weight or gallon jug of water. The tank thinks it is full and replenishes with fresh solution more quickly
	Calcium embedded in rollers	Run a Deglaze followed by Erase Decalcification cleaning once a week to minimize contamination
	pH too low / Phosphates in Fountain Solution	Higher pH, non-phosphate Fountain Solutions leach less calcium and minimize paper / ink interaction
	Unstable tap / city water	Consider purchasing an RO water softener. Depending on hardness, the water source can contribute to contamination
	No Calcium sequesterant	Many ACTEGA Kelstar solutions contain calcium fighters to buffer leached calcium, call to find the correct solution or additive

Contact ACTEGA Kelstar at 856 829 6300 or info.actega.kelstar@altana.com for additional information or technical assistance.

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Quick Conductivity Rise / Minimizing the Conductivity Rise	Poor filtration	Try a Flo Clear filter unit to filter used fountain solution and extend tank life
	DO NOT add water of alcohol to reduce tank conductivity!	Both do reduce the actual number, however they also reduce the working amount of gum, desensitizing, buffer etc. making problems worse and occur more quickly
Picture Framing / Backcylinder Buildup Long Runs Short Runs	Excessive form roller settings	Reduce roller settings to plate
	Pressure from water form roller dragging plate causing sensitivity	Reduce roller setting or percent (%) of drag
	Blanket packing not cut	Cut the packing to fit the sheet size. Longer runs usually justify this as is almost always fixes the issue
	Excessive ink or emulsified ink with or without high water dials	Switch to Starfount SF-5096 or a similar version. The solvent reduction and increased desensitizing has been shown to reduce ink and water to improve transfer. This leaves less ink to build up outside the sheet
	Printing edges of sheet	Unless there is no alternative, running a larger margin around the sheet enables you to lock out more keys toward the edges
	Not enough wetting or solvency	Try increasing overall dosage or replacement dosage
	Not enough NPA	Increase NPA in Fountain Solution or add 1 ounce per Gallon of NPA # 3 to each mixed Gallon of Fountain Solution in re-circulator

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Dot Gain	Ink and water settings are too high	Reduce ink and water to minimize gain, or try one of our dot gain reducing fountain solutions like Starfount SF-5088
	Blankets are over packed	Reduce blanket packing
	Excessive plate to blanket pressure	Run a thinner strip from plate to blanket; Check press manufacturer specifications
Plate Blinding – Chemical	Too much gum in the Fountain Solution	Reduce gum content or gum additives as too much can cause the image to become water receptive and not print
	Calcium build up on plate and rollers	Clean plates with CTP Plate Cleaner for conventional ink or Protean Plate Cleaner for UV and deglaze rollers If problem persists, see quick conductivity rise section to minimize or contact plate representative
	Plate cleaners and/or scratch removers dried on plate image	Always rinse plate thoroughly and immediately after using such cleaners, you may have to burn new plates
	Residual surfactant from water miscible wash	Change to non water miscible wash or run a cycle of Final Rinse to remove residuals

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Plate Blinding – Mechanical	Excessive plate to blanket pressure	Run a thinner strip plate to blanket
	Roller durometer too hard	Weekly usage of Wipe Out , Erase and / or Deglaze will keep rollers soft and ink receptive Replace rollers as needed
	Ink and dampening form rollers improperly set	Reset to correct specification
	Plate graining too deep	Try running a shallower graining While deeper grains carry more water, they are more susceptible to contaminants
Image Loss	Using alkaline plate cleaners on unbaked CTP plates	These cleaners act as a deletion fluid on unbaked plates, use the approved cleaners CTP Plate Cleaner for conventional ink or Protean Plate Cleaner for UV
	Surfactant attack	Certain surfactants in Fountain Solutions or washes can harm unbaked plates. Call to discuss and/or have plates sent for compatibility check
	Very aggressive / too much alcohol replacement	For the same reasons as surfactant attack, call to discuss compatibility
	Ink and dampening form rollers improperly set	Re-set to correct specification or no tighter than needed for good transfer
	Excessive piling	For longer runs & webs, keep blankets cleaned to reduce friction and squeeze from piling

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Restarts – Slow / Poor	Dosage too low	Increase dosage
	Too little gum desensitizing	Use a gum arabic additive or call to discuss higher gum / desensitizing alternatives
	Ineffective storage gum	If plates were saved and do not start clean, try storing with Total Recall to ensure quicker startups
	Pre-flood or startup sequence needs adjusting	Set pre-damp / pre-flood to a higher setting so that more water is delivered to plate on startup
	Surfactant build-up from water miscible wash	Use proper plate cleaner or Final Rinse to remove build-up
Plate Sensitivity / Toning / Scumming At start of Run	Bad plate or bad lot of plates / Plate chemistry needs changing	Re-burn of a different lot. New plates will always start clean and run a few K impressions with only water. Replace finishing chemistry or try a hone test. If honed area stays clean, the plates are bad, if not there may be a problem with the fount, give us a call
	Finishing gum was not properly removed	Drop a small amount of acetone on the non image area of the processed plate. If a ring, the color of the image appears, the plate gum was not removed and needs to be rewashed or have another processed. Also check the scrubber roller in the gum removal area as it may need adjustment or replacing

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In Middle of Run	Mechanical setting	Ask yourself, is this 1 press, 1 unit, and/or 1 side of the sheet? If yes, check rollers and settings or, check the specific problem color with the ink company. The Fountain Solution is not smart and will not single any of these out from the rest
	Dosage too low	Increase dosage
	Insufficient gum in the Fountain Solution	Add gum, or call to revise the Fountain Solution
	Glazed blanket, ink rollers or dampening rollers	Deglaze with Deglaze & Erase
Foaming	Chemical vs. Mechanical Test	Fill an empty bottle halfway with FRESH dilute solution and shake. If foam is no more than a couple of inches and breaks in 10 seconds or less, the problem is mechanical, not chemical
For Chemical Foam	Inadequate or insufficient Defoamer in Fountain Solution	Add an ounce of FS Defoamer II to the recirculator or call to inquire about a better defoaming product

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For Mechanical Foam	Clogged or jammed filters	Replace all filters in the circulator and check the pressure and lines; Try Systems Cleaner to flush contaminants
	Air influx from return lines	Adjust FS flow rates – incoming / returning to tank
	Impellor in circulator is high impact / too large	Switch to a low impact impellor. Many new Technotrans and AWS units come with different sized impellers, the smallest of which creates less agitation
Calcium Glazing	Calcium embedded in blankets, rollers, and plate graining	Run deglaze cycle with Deglaze & Erase. Also, clean with proper plate cleaner, then see minimizing conductivity section to help control future problems, although a continued roller maintenance program is always needed
High Water Dials	Metering nips set too tight	Open or crack settings to allow more water
	Too little alcohol replacement	Increase sub or one step
	Inadequate wetting	Call to get different recommendation if water looks to be sitting in ink train

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Ink Drying Issues	Inadequate or insufficient dryer in Fountain Solution	Call to check levels or to change to a higher drying product. Also, try adding 1 ounce of Fountain Dryer Stimulator to working fountain solution as needed until desired dry speed is achieved
	High water dials / Fountain Solution dosage too high	Reduce Fountain Solution dosage and try bringing down water speeds. Call to switch to a solution with better transfer properties enabling a thinner film thickness
	Running stay open inks	Try adding a water activated dryer to the ink, such as speedy dry, or switch to a faster setting non-stay open ink set. Stay open inks do just that. They do not dry
	Sheetfed low percent (%) of IR energy	Increase percent (%) of IR energy / evacuation
Ink Piling	Vibrator rollers . Recirculator temperature is too hot	If ink runs too hot, they can dry up and cause more piling to occur
	Ink is too tacky, too stiff, or dries too fast on the rollers or plates	Contact your ink supplier(s) to reduce/check the tack ratings of the ink
	Poor blanket release / Blanket height over bearer is too low	Improve the blanket release / change or repack blanket. Contact your blanket supplier(s)

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Ink Piling	Ink / water balance issues	Call to discuss alternative solutions, water pickup properties
	Poor Fountain Solution lubrication	More non-piling and softeners can be added, however keep in mind VOC level is raised and dot gain may rise due to ink softening
Paper Piling / Linting	Inadequate or insufficient NPA	Try adding 1-2 ounces of NPA # 3 or call to discuss alternatives
	Blankets too tacky / Bad release	Run a blanket conditioner, or change blanket for better release
Backtrapping	Running Uni-Tack inks or ink sequence is wrong	Ink tacks should be arranged highest to lowest on press, generally KCMY. Sometimes Uni-Tack inks tend to backtrap more because the tack ratings are the same, contact ink supplier to discuss
	Ink settings too high	Try to reduce the ink film thickness. Call about a better desensitizing Fountain Solution
	Not enough NPA	Non-piling and softeners can be added to help with higher tack inks that tend to backtrap. Again, remember dot gain may rise due to ink softening

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Dampening System Feedback	Improper ink / water balance	Call to discuss alternative solutions, water pickup properties
	Chrome roller is sensitive	Use Chrome Roller Cleaner to clean and desensitize
Chemical Stripping	Usually in magenta unit and contamination causes other issues such as blinding, glazing etc.	Run a deglaze cycle, and see glazing and conductivity sections to minimize contamination
Ink Water Balance Stripping	Water rides up the ink unit and sits in the ink train. Stripping usually starting at the top of the plate and sometimes off the ink ball itself	This is caused by the inadequacy of the current solution or alcohol replacement to cut and emulsify the ink. This inability is why the water sits freely and other problems such as toning and high water dials may occur since the ink is too dry. Fans blowing on the unit itself helps to evaporate the "free water" acting as a band-aid
Poor Stochastic Dot Structure (feathered looking dots)	Poor Fountain Solution desensitizing	Call for a higher desensitizing Fountain Solution to try adding an ounce or two of Metal Plate Cleaner Additive to the circulator
	Poor blanket release	Use a high-release blanket to improve transfer properties
	Plate to blanket pressure is too high	Back off on the stripe between the plate and blanket to create less of a squeeze. Run only the minimum needed for good transfer and color control

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Micro-Printing (small dots of ink in non-image area of stock)	Plate sensitivity	Check the non-image area of the plate with a loop, if ink is present, grain may be too deep or prepress issue may have occurred. See the plate sensitivity section for other help
	Bad filtration	Use a Flo Clear or other Fountain Solution filtration device to remove unwanted free floating ink particles that adhere to the sheet
	Ink breakdown	Poor ink/water balance, call to discuss alternatives
Chasing Color / Control Issues	Out of ink water balance	Many of ACTEGA Kelstar's newer Fountain Solutions provide much better transfer properties when compared to our competitors. If you are switching from a competitive product, make sure to reduce the water in each unit until the sheet tones. Then take a density reading. Bring your ink down until you are within SWOP or your specifications. Then repeat, bringing the water down, followed by the ink until you are running as thin a film thickness as possible
	Ink not transferring	Check/reset rollers in ink train and in water train
	Glazed / damaged rollers	Deglaze or replace worn or damaged rollers

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